Claims

[c1] A process for addressing an electro-optic material having first and second display states differing in at least one optical characteristic and being capable of being changed from its first to its second display state by application of an electric field to the material, the process comprising applying an electrically charged fluid to a portion of at least one surface of the material, thereby changing the display state of a portion of the material.

[c2] A process according to claim 1 wherein the fluid is a liquid.

[c3] A process according to claim 2 wherein the liquid is applied from a fluid dispenser which does not contact the electro-optic material.

[c4] A process according to claim 3 wherein the liquid is applied as a plurality of discrete droplets of liquid.

[c5] A process according to claim 1 wherein a conductive coating is provided on the opposed side of the electro-optic material from that to which the fluid is applied.

[c6] A process according to claim 1 wherein a surface of the electro-optic material, on the opposed side of the electro-optic material from that to which the fluid is applied, is in contact with a conductive member while the fluid is being applied.

[c7] A process according to claim 1 wherein the fluid is applied to a layer having a greater electrical conductivity perpendicular to the surface to which the fluid is applied than parallel to this surface.

[c8] A process according to claim 2 wherein the surface of the electro-optic material to which the liquid is applied is provided with a layer arranged to absorb the liquid.

[c9] A process according to claim 2 further comprising evaporating the liquid from the surface of the electro-optic material.

[c10] A process according to claim 9 wherein the surface of the electro-optic material is heated to assist evaporation of the liquid.

[c11] A process according to claim 9 wherein a flow of gas is provided past the surface of the electro-optic material to assist evaporation of the liquid.

[c12] A process according to claim 1 wherein an area of the electro-optic material is first brought to a substantially uniform optical state and thereafter the electrically charged fluid is applied to a portion of said area to change the optical state of said portion, thereby producing an image on said area.

[c13] A process according to claim 2, wherein the liquid is applied from a brush member which contacts the electro-optic material.

[c14] A process according to claim 1 in which the electro-optic material is bistable.

[c15] A process according to claim 1 wherein the electro-optic material is a rotating bichromal member, electrochromic or liquid crystal material.

[c16] A process according to claim 1 wherein the electro-optic material is a particle-based electrophoretic material comprising at least one type of electrically-charged particle and a suspending fluid, the at least one type of electrically-charged particle being capable of moving through the suspending fluid on application of an electric field to the electro-optic material.

[c17] A process according to claim 16 wherein the at least one type of electrically-charged particle and the suspending fluid are encapsulated in at least one capsule.

[c18] A process for addressing an electro-optic material having first and second display states differing in at least one optical characteristic and being capable of being changed from its first to its second display state by application of an electric field to the material, the process comprising contacting the electro-optic material with a non-conductive brush means wet with a conductive liquid while applying a potential difference between the brush means and the electro-optic material.

[c19] A process according to claim 18 wherein the conductive liquid comprises an electrolyte dissolved in a solvent.

[c20] A process according to claim 19 wherein the electrolyte is a salt and the solvent comprises water.

[c21] A process according to claim 19 wherein the electrolyte comprises an anti-static agent.

[c22] A process according to claim 21 wherein the anti-static agent comprises an organic quaternary ammonium salt.

[c23] A process according to claim 18 wherein the surface of the electro-optic material to which the liquid is applied is provided with a layer arranged to absorb the liquid.

[c24] A process according to claim 18 in which the electro-optic material is bistable.

[c25] A process according to claim 18 wherein the electro-optic material is a rotating bichromal member, electrochromic or liquid crystal material.

[c26] A process according to claim 18 wherein the electro-optic material is a particle-based electrophoretic material comprising at least one type of electrically-charged particle and a suspending fluid, the at least one type of electrically-charged particle being capable of moving through the suspending fluid on application of an electric field to the electro-optic material.

[c27] A process according to claim 26 wherein the at least one type of electrically-charged particle and the suspending fluid are encapsulated in at least one capsule.